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United States Patent [19]**Bridenbaugh et al.****[11] Patent Number: 5,659,181****[45] Date of Patent: Aug. 19, 1997****[54] ARTICLE COMPRISING α -HEXATHIENYL**

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257/72

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257/347, 443, 64, 72; 252/510, 511

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[57]**ABSTRACT**

A previously unknown phase of α -hexathienyl, designated α -6T/HT, exhibits diffraction peaks at $2\theta=4.31^\circ$, 8.64° , 12.96° , 17.32° , 26.15° and 29.08° in a $\text{CuK}\alpha$ powder X-ray diffraction pattern, and is expected to have properties (e.g., high hole mobility) that make the phase desirable for use in, e.g., thin film transistors. Substitution of thin films of α -6T/HT for prior art organic thin films in thin film transistors and other devices is contemplated.

7 Claims, 2 Drawing Sheets